



RS Global
Journals

Scholarly Publisher
RS Global Sp. z O.O.
ISNI: 0000 0004 8495 2390

Dolna 17, Warsaw, Poland 00-773
Tel: +48 226 0 227 03
Email: editorial_office@rsglobal.pl

JOURNAL	International Journal of Innovative Technologies in Economy
p-ISSN	2412-8368
e-ISSN	2414-1305
PUBLISHER	RS Global Sp. z O.O., Poland
ARTICLE TITLE	RESEARCH ON CHINA MONGOLIA ECONOMIC AND TRADE COOPERATION
AUTHOR(S)	Mavidkhaan Baasandulam
ARTICLE INFO	Mavidkhaan Baasandulam. (2020) Research on China Mongolia Economic and Trade Cooperation. International Journal of Innovative Technologies in Economy. 4(31). doi: 10.31435/rsglobal_ijite/30092020/7157
DOI	https://doi.org/10.31435/rsglobal_ijite/30092020/7157
RECEIVED	08 July 2020
ACCEPTED	17 August 2020
PUBLISHED	21 August 2020
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License .

© The author(s) 2020. This publication is an open access article.

RESEARCH ON CHINA MONGOLIA ECONOMIC AND TRADE COOPERATION

Mavidkhaan Baasandulam

*Ph.D. Candidate, School of Business, Hunan University of Science and Technology,
Republic of China, Hunan province, Xiangtan city*

DOI: https://doi.org/10.31435/rsglobal_ijite/30092020/7157

ARTICLE INFO

Received 08 July 2020

Accepted 17 August 2020

Published 21 August 2020

KEYWORDS

China, Mongolia, Economic and Trade Cooperation, Countermeasures and Suggestions Economic integration.

ABSTRACT

Since 1978, China's economy has opened to the world. Over the past 40 years, China's capital stock has grown at an annual rate of 6.9%. China began to implement the "Going out" policy in 2002, mainly to promote its overseas investment activities. The Chinese government launched a rescue plan of 4 trillion yuan in 2008, hoping to shift from export led growth to promote the expansion of the internal market. In this paper, China imports to Mongolia have increased year by year, accounting for 33.5% of its imports in 2018. China has pledged to invest globally by 1.25 trillion USD in 2025, and has increased investment in Mongolian mineral deposits. When the Chinese economy was in the "New Normal", it proposed the "Belt and Road" initiative. To strengthen the connection between the "Belt and Road" and the "Steppe Silk Road" initiative, 32 projects will be implement in Mongolia. After reform and opening up, China has made great achievements. But, the upgrading of industrial structure and technological progress are still slow, economic growth continues to slow down, the aging population is becoming more serious, and the production capacity is seriously surplus. From Mongolia, there are abundant natural resources, and the mining industry is driving economic growth. The economic growth rate is relatively fast, but the industrial structure is single, the evolution of the industrial technology system is stagnation, and the human resources are insufficient, resulting in excessive dependence on foreign trade. The economic situation depends on the neighboring countries, the inflation is serious, and the unemployment rate remains high. Therefore, under such circumstances, China and Mongolia should make good use of the geographical advantages of their neighbors, enhance mutual trust, strengthen economic trade cooperation, maintain the unity of their countries and maintain the strategic balance of international power and jointly create political mutual trust and economic cooperation. This paper takes China Mongolian cooperation as the main research line, and explores new ways for economic and trade cooperation to promote the upgrading of industrial structure and sustained economic growth of the two countries. In addition, as the main component of the "Belt and Road" initiative, Mongolia strengthens economic and trade cooperation with China and promotes the improvement of the level of cooperation between the two countries, and can also achieve long term common development.

Citation: Mavidkhaan Baasandulam. (2020) Research on China Mongolia Economic and Trade Cooperation. *International Journal of Innovative Technologies in Economy*. 4(31). doi: 10.31435/rsglobal_ijite/30092020/7157

Copyright: © 2020 Mavidkhaan Baasandulam. This is an open-access article distributed under the terms of the **Creative Commons Attribution License (CC BY)**. The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

1. Introduction.

Mongolia is one of the earliest countries to agree China's independence. The two countries have never stopped cultural, economic and trade cooperation since ancient. As the trend of globalization continues to deepen, China Mongolia political relation getting closer and the economic

trade cooperation between the two countries has increasingly played an important role in the security and economic prosperity of Mongolia's periphery. With the proposal of the "Belt and Road" initiative and the continuous deepening of regional economic integration, the level of economic trade cooperation between the two countries has been continuously improved, especially the construction of the China Mongolia Russia economic corridor, which has ushered in greater development of China Mongolia economic, trade cooperation. There are currently have 152 contracts, including the 2014 "Mongolia and China Medium Term Plan for the Development of Economic and Trade Cooperation". Its goal is to deepen the principle of equality and mutual benefit based on good neighborly friendship and mutual trust between China and Mongolia, and to deepen bilateral and multilateral trade on the basis of favorable conditions for cooperation. The plan will implement between 2014 and 2044 year, and the set goal of reaching a trade volume of 10 billion USD between China and Mongolia by 2020 is expected to be achieved as scheduled. In order to achieve this, Mongolia is trying to diversify its economy, hoping to increase the import of agricultural products and exports of mineral products, so that it tends to no longer rely on the needs of China related industries. Over the past 20 years, China Mongolia trade volume has been on the rise. In 2019, China and Mongolia trade volume exceeded 8.85 billion USD, accounting for 64.3% of Mongolian foreign trade. In today's international environment, the prospects for trade development between the two countries are very broad.

2. China Mongolia Economic and Trade Cooperation.

Mongolian foreign trade has become an important part of its social and economic development and has expanded. China Mongolian cooperation without borders and political disputes is not always good, but so far, cooperation has been maintained. Since the establishment of diplomatic relations between China and Mongolia, the cooperation between the two countries has experienced many twists and turns.

At the beginning of the establishment of diplomatic relations, Chinese Prime Minister Zhou En Lai and Mongolian Prime Minister Yu.Tsedenbal began the China Mongolian friendship after their first mutual visit. Mongolia has been holding economic and trade cooperation with the Russia from 1930s to 1950s. After the World Second War, the political, economic, and trade situation on the international stage changed, and Mongolia was able to establish relations with other countries. In 1956, established economic and trade cooperation with European countries. Since 1960, has traded with Switzerland, Japan, Britain, France, Australia and other countries. Although economic, trade cooperation has improved in the early 1950s, due to the influence of Russia, relations between the two countries have deteriorated, leading to a cold period for China Mongolia economic and trade cooperation.

In 1956, China and Mongolia established a truly cooperative relationship. Since then, China Mongolia economic, trade cooperation has been advancing continuously through twists and turns, and has now attracted the attention of the world. Through the development of China Mongolian friendly relations, two countries trade volume reached 24.6 million rubles, between 1952 and 1961, nearly 67% of the total trade in 1951. When the trade volume between China and Mongolia was converted into USD, it increased from 750,000 USD to 49.94 million USD, of which China's exports were 41 billion USD. In terms of trade structure, primary products and consumer goods are the main products. The products imported from China are mainly food, silk and tobacco, construction materials, trucks, industrial equipment and pharmaceuticals. The products exported to China are mainly for livestock products, cashmere products, animal and plant medicines and wood. From 1966 to 1971, Mongolia continued its efforts to normalize relations with China. In the future, Mongolia will seek friendly cooperation and good neighbour relations with China. Since the 1960s, the deterioration of China Russia relations has a profound impact on China Mongolian relations, and economic, trade relations have declined sharply. In 1962, China provided 26.85 million USD to Mongolia, which dropped to 7.9 million USD in 1963, and the trade volume between the two countries dropped to 350,000 USD in 1967. The trade volume between China and Mongolia has gradually increased since 1969, fluctuating 4-5 million USD between 1973 and 1975, and surpassed 4.5 million USD since 1982. In the early 1990s, Mongolian mission was to build a democratic society and human rights and freedoms. Large countries such as the United States and Japan were the key factors in Mongolian domestic and foreign policy. The expansion of cooperation between the United States and Japan under the "Third Country" policy has led to changes in the volume of trade with China.

At the beginning of the transition period, Mongolian foreign trade volume fell, and by 1991, the trade volume reached 7 million USD, a steady increase compared with the mid 1990's. The scale of China Mongolian trade was only 1.414 billion USD in 2007, but since 2010, Mongolia has been

committed to reforming its mining industry and improving the investment environment. With the implementation of this policy, the economy has recovered and trade between China and Mongolia has risen again. With the decline in the prices of mining products in the world market, from 2012 to 2013, Mongolian total foreign trade and China Mongolia trade both declined. But, as China and Mongolia actively promote and coordinate the integration of the “Belt and Road” and “Steppe Silk Road” initiative, China Mongolia trade has reached a new level. In 2018, Mongolia traded with 159 countries and regions, and the total trade volume reached 12.9 billion USD, an increase of 22.3% over the previous year. Among them, total exports were 7 billion USD, and total imports were 5.9 billion USD, an increase of 13.1% over the previous year. For exports, it increased from 267 million USD in 2000 to 6.51 billion USD in 2018, and imports increased from 610 million USD to 1.96 billion USD, accounting for Mongolian foreign trade growth to 7% and 65.4%. In terms of trade structure, China exports to Mongolia are mainly gasoline, clothing, textiles, industrial and mining equipment, electrical appliances, construction materials and consumer goods. Mongolian exports to China are mainly more than 20 products such as leather, animal and plant medicines, wood, scrap metal, coal and iron ore. As China economy continues to develop, the demand for trees, coal, and energy is also growing, and it can no longer meet the demand for domestic resource supply. However, Mongolia is rich in minerals and raw materials, and the trade between China and Mongolia is very active. Therefore, Mongolia can provide China with mineral resources. China and Mongolia have less overlap in export product structure and market. This shows that the export trade competition between China and Mongolia is weak, and the product structure has unparalleled complementary advantages.

Loans and grants are a means of cooperation between China and Mongolia. China Mongolia economic and technical assistance negotiations were established in 1956. From 1956 to 1959, China provided a grant of 160 million rubles to Mongolia and negotiated the construction of 18 buildings. Chinese Premier Zhou En Lai visit to Mongolia in May 1960, signed the “Friendship and Mutual Assistance contract” and decided to provide Mongolia with a loan of 200 million rubles. The loan is used to construct buildings, roads, bridges, factories, enterprises and social and cultural places. China has once again provided assistance and special loans to the development of Mongolia to strengthen its friendly relations. In return, the Mongolian government sent 20,000 horses, 26,000 tons beef and mutton, flour, wheat and other things to China. At the same time, China granted a loan of 100 million rubles to Mongolia and negotiated the construction of six buildings from 1959 to 1964. At that time, more than 10,000 Chinese were employed in Mongolia. Since the establishment of diplomatic relations between China and Mongolia, the first ten years have served the interests of the peoples of China and Mongolia and the peace and security of Asia and the world. In 1996, when the Mongolian Prime Minister P. Jasrai was visited to China, the Chinese government provided 20 million yuan in grants to Mongolia, and provided a total of 180 million yuan loan in interest free between 1991 and 1998. These are all aimed at overcoming Mongolian transitional challenges, restoring the economy, and improving people’s living standards and construction.

As China's opening to the outside world continues to increase, direct investment in Mongolia has continued to rise, especially since 1998, China's investment in Mongolia has entered a new stage. Since Mongolian transition from a centrally planned economy to a market economy in 1993, the “Foreign Investment Law” was revised in 2008, laying the foundation for attracting foreign direct investors. According to the Ministry of Foreign Investment, direct investment in Mongolia from 1980 to 2004 was 1.2 billion USD, from 2005 to 2009 was 1.572 billion USD, and in 2012 alone it reached 320 million USD. This shows how fast investment flowing into Mongolia is growing. In addition, since 1990, mining alone has accounted for more than 60% of total foreign direct investment. Due to large scale mining projects, the flow of foreign direct investment is expected to increase in the future. With the deepening of China Mongolia economic cooperation, the investment fields of the two countries have expanded year by year, and the total investment has also slowly increased. Since 1998, China has been the largest investor in Mongolia. In recent, enterprises in 79 countries and regions such as China, Russia, Japan, the United States, and Luxembourg have made direct investments in Mongolia, and investment projects have also continued to expand.

Table 1. Statistics of China's direct investment in Mongolia (Unit: Million USD)

Year	Chinese investment in Mongolia	Mongolia's investment in China	Year	Chinese investment in Mongolia	Mongolia's investment in China
2001	47.3	12.0	2010	521.3	12.0
2002	135.3	18.0	2011	1100.0	0.0
2003	46.9	15.0	2012	3200.0	25.0
2004	112.6	134.0	2013	3500.0	207.0
2005	235.8	322.0	2014	800.0	322.0
2006	227.9	94.0	2015	2300.0	289.0
2007	172.0	141.0	2016	2400.0	218.0
2008	339.6	231.0	2017	4100.0	232.0
2009	497.8	325.0	2018	3900.0	115.0

Source: Data report of China Statistics Bureau and Mongolia Statistics Bureau from 2001 to 2018

It can be seen from Table 1 that China's investment in Mongolia decreased significantly in 2014 due to the revision of the Mongolian investment law, that is, the increase in the investment threshold and the reduction in profit space. On the contrary, Mongolia's relatively small investment in China means that the gap between the economic level of China and Mongolia and Mongolia's investment capacity are weak.

3. Opportunities of “Belt and Road” Initiative to China Mongolia Trade Cooperation

The “Belt and Road” initiative proposed by Chinese President Xi Jin Ping in 2013 is an ambitious concept in China's historical development process, and a grand strategy for China opening to the outside world under the new situation. Mongolia is an important participant in the northern part of the “Belt and Road” and a good neighbor of China. Since the proposal of the “Belt and Road” initiative, high level interaction between China and Mongolia has become more frequent, and pragmatic cooperation between the two countries has been closer. President Xi Jin Ping and Prime Minister Li Ke Qiang visited Mongolia, Mongolian leaders visited China and to attend important international conferences. China and Mongolia have reached a series of important consensuses in the economic, trade field, which has vigorously promoted the development of China Mongolia economic and trade cooperation to a wider field and deeper levels. So far, 150 countries and international organizations are have signed cooperation coordination, and the documents of important international mechanisms such as the United Nations, the Group of 20, and Asia Pacific Economic Cooperation have embodied the concept of cooperation. As the number of countries joining the initiative increases, aspirations are being put into practice and ideas are being realized. According to preliminary estimates, 800 billion USD will be invested in 900 projects in 64 countries. Since 2016, the implementation phase has begun, and infrastructure work is ongoing, reaching consensus with countries along the route. In 2024, will be formed first step of integration, and countries along the route will establish a high standard free trade zone network. The strategic route to the Baltic Sea, Mediterranean Sea and Indian Ocean will be to enter safely. In 2049, a comprehensive alliance of interests, responsibilities and fate were established, and the “five links” has been basically implemented. Through the “five links” or policy communication, facility connectivity, trade application, capital, finance, and people's hearts, created a new trend to be systematic, networked, and people-oriented.

China and Mongolia have reached an important consensus on the “Belt and Road” and “Steppe Silk Road” initiatives, and 32 projects will be implemented in Mongolia. The “Belt and Road” and the “Steppe Silk Road” initiative are consistent in concept, content and interests are converging. After docking, the mutual trust between the two countries will be greatly enhanced, and bilateral mutually beneficial cooperation will be deepened. The premise of stable development is also an important measure to further promote the economic corridor. At the same time, the signing of the “Outline of China-Mongolia-Russia Economic Corridor Planning” also marked the official launch of the first regional economic corridor under the “Belt and Road” initiative. The integration of the “Belt and Road” and “Steppe Silk Road” initiatives have helped deepening China Mongolia economic, trade cooperation. China is Mongolian largest trading partner. According to the statistics of Mongolia, from 2013 to 2018, total foreign trade was 61.82 billion USD, and China Mongolian total trade was 34 billion USD, accounting for 55.1%. This initiative promotes the implementation of major cooperation

projects between China and Mongolia. As of 2018, China's direct investment in Mongolia exceeded 3.9 billion USD accounting for about 30% of Mongolian total foreign investment.

Wang Yi, Permanent Secretary of the State Council of China and Minister of Foreign Affairs, visited Mongolia in 2018 to strengthen China Mongolia comprehensive strategic partnership, deepen mutually beneficial cooperation, and advance cooperation agreements. According to Minister Wang Yi's speech at a press conference, "The further development of the Belt and Road Initiative is to accelerate the infrastructure construction of Mongolia; second, to remove obstacles that hinder the development of the country, improve living standards and everyone can benefit from the initiative; third, cooperate with Mongolia to build the "Green Silk Road" in the field of environmental protection; fourth, make full use of Mongolian resource advantages and help improve the sustainable development of the supplying country". With the continuous deepening of cooperation within the framework of the "Belt and Road" initiative, the China Mongolia Cross Border Economic Cooperation Zone, China Mongolia negotiations on free trade agreements have been actively promoted, and Mongolia has become a member of APEC with the support of China. China has completed a contracted engineering business of approximately 9 billion USD in Mongolia and implemented projects such as bridges, roads, municipalities, factories and mines. Among them, projects such as Tumurtei Zinc Mine, Cement Plant, Amgalan Thermal Power Plant, Baganuur Power Plant have become successful models in the fields of mineral development and production capacity cooperation. China actively supports the development of Oyutolgoi Copper Mine has provided strong support in energy supply and project development. The two sides have cooperated closely in the development of the Tavantolgoi Coal Deposit. Chinese companies have accumulated direct investment and contracted project, it has created nearly 100,000 jobs for the local area and paid nearly 2 billion USD in taxes and fees.

The "Belt and Road" initiative promotes the implementation of aid to Mongolia and loans. Since the proposal of the "Belt and Road" initiative, China has increased its efforts to provide Mongolia's free assistance and preferential export buyer's credit, implemented important projects that have contributed to local social and economic development, and constructed the country's first expressway, the first cross-region high-voltage power transmission and transformation line, two overpasses crossing railroad crossings, reinforced two concrete bridges across the Tuul River and multiple interprovincial highways; help Mongolia build a backbone communications network and education and electronic medical network covering Mongolia; Implemented projects such as schools, shantytown housing renovation, disabled children development center, 1008 sets of housing and so on.

The "Belt and Road" initiative has helped China Mongolia financial cooperation achieve major breakthroughs. In September 2017, Bank of China, Industrial and Commercial Bank of China were successively setup representative offices in Mongolia to provide convenient financial platform support for pragmatic cooperation between the two countries; the China Development Bank, the Export Import Bank of China and major state owned commercial banks have accumulated loans in Mongolia more than 10 billion yuan, which has effectively promoted enterprise development and project construction; the scale of bilateral local currency swaps between China and Mongolian central bank has expanded to 15 billion yuan become the main settlement currency of China and Mongolia; the comprehensive use of financial means such as financing has established a funding bridge for bilateral economic and trade cooperation.

The "Belt and Road" initiative has boosted China Mongolia humanitarian exchanges and cooperation. From 2013 to 2018, China's human resources training for Mongolia increased. In 2016, it completed the five year training target for 1,000 people in Mongolia announced by President Xi Jin Ping during his visit to Mongolia in 2014. China supports Mongolian citizens to study, travel, doing business and receive medical treatment. 250 journalists visited China and will translate 25 Chinese movies. In 2015, 382 people from 58 teams from Mongolia's agriculture, hospitals, sports, food safety, hydrology and meteorology, radio and television, information, trade, ecology, finance and technology received vocational training in China. This has strengthened the understanding and friendship between the two countries. Compared with developed countries such as Europe, the implementation of the "Belt and Road" initiative is a development gap. As Asian countries are in the process of economic transformation and transition, they are adapting to environmental changes and ensuring sustainable economic development. China Mongolia cooperation faces the problems of Mongolian infrastructure, constantly changing government members, unstable public policies, and

poor investment conditions. China's "Belt and Road" and Mongolia's "Steppe Silk Road" initiative benefit the people of both countries.

China and Mongolia are important neighbors. After years of development in friendly relations and pragmatic cooperation, a solid foundation has been laid. The two countries have extensive cooperation space in the fields of mineral resources development, infrastructure construction and financial cooperation. The "Belt and Road" initiative strengthens political mutual trust, draws closer to the bond of interests, deepens the connection with the "Steppe Silk Road", gives full play to the role of major projects in pragmatic cooperation between the two countries, and to construct new breakthroughs have been made in the negotiation of trade agreements and the establishment of operating by Mongolian financial institutions in Mongolia, which has continuously pushed China-Mongolia economic and trade cooperation to a new level.

4. An Empirical Analysis of China Mongolian Economic and Trade Cooperation

1) Given data and interpretation

TRADE - Total trade flow between Mongolia and partner countries. The unit is millions USD. The variable GDP- measures the scale of the economy in terms of gross domestic product and represents the gross domestic product of Mongolia and its partners in millions USD. The variable POP- represents the population of Mongolia and partner countries at the end of the year, in millions person. The variable ULEVEL- indicates the level of urbanization in Mongolia and partner countries, unit is %. The variable FDI- represents the amount of direct investment in Mongolia and partner countries in millions USD. The variable INF- indicates the inflation level of Mongolia and partner countries. The variable DIST- represents the distance from Ulaanbaatar to the capital of the trading partner country in thousands of square kilometers. The variable DUMMY2 is a dummy variable indicating whether this trading partner country is a member of the World Trade Organization. If it is a member state, the value is 1, not a member state, the value is 0. DUMMY1 is a dummy variable that indicates whether Mongolia and partner countries are neighboring countries. If neighboring countries, the value is 1, if they are not neighboring countries, the value is 0.

2) Data source

Relevant data of China and Mongolia are from "Statistical Data Report of the General Administration of Taxation", "Mongolian Statistical Yearbook" and "China Statistical Yearbook" (2000-2018), "Mongolia's Foreign Trade Blue Book" (2017), World Bank database. The original data of relevant statistical yearbooks are selected. Data from other countries are selected from the World Bank database. DIST related data was obtained from the website (<http://timeanddate.com>).

Data related to GDP, INF and FDI are obtained from the World Bank database (<http://data.worldbank.org>).

Use the gravity model to write the equation for foreign trade total flow:

$$\begin{aligned} \ln(\text{TRADE}_{ijt}) = & \beta_1 + \beta_2 * \ln(\text{GDP}_{ij}) + \beta_3 * \ln(\text{POP}_{ij}) + \beta_4 * \ln(\text{ULEVEL}_{ij}) + \beta_5 * \ln(\text{FDI}_{ij}) + \\ & + \beta_6 * \ln(\text{INF}_{ij}) + \beta_7 * \ln(\text{DIST}_{ij}) + \beta_8 * (\text{DUMMY1}_{ij}) + \beta_9 * \ln(\text{DUMMY2}_{ij}) + \varepsilon_{ij} \end{aligned} \quad (1)$$

In the equation, TRADE_{ijt} represents the total trade volume of countries i and j at time t , GDP_{ij} represents the GDP of countries i and j at time t , POP_{ij} represents the total population of countries i and j at time t , and ULEVEL_{ij} represents the countries i and j at urbanization level at time t , FDI_{ij} represents the total direct investment of countries i and j at time t , INF_{ij} represents the inflation level of countries i and j at time t , DIST_{ij} represents the distance between countries i and j , and DUMMY1_{ij} and DUMMY2_{ij} represent countries i and j , respectively whether neighboring countries and member countries of the International Trade Organization. t represents the time between 2000-2018 year, β_1 represents the model constant, and ε_{ij} is the random error. Using Mongolia, China, Russia, North Korea, Japan, the United States, Germany, Canada, Kazakhstan, Italy, France, Singapore and other 20 countries and regions, 2000-2018 relevant foreign trade 380 panel data, through the trade gravity model, the calculation Factors in China Mongolian economic and trade cooperation. The standard gravity model is as follows:

Table 2. Standard Trade Gravity Model Structure

Source	SS	df	MS	Number of obs	=	380
Model	167.244593	3	55.7481978	F(3, 376)	=	2375.45
Residual	8.82416138	376	.023468514	Prob > F	=	0.0000
				R-squared	=	0.9499
				Adj R-squared	=	0.9495
Total	176.068755	379	.464561358	Root MSE	=	.15319

Trade	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Export	.3997378	.0286596	13.95	0.000	.3433846 .4560909
Import	.5828089	.0279034	20.89	0.000	.5279427 .6376752
Dist	-.0068412	.0098738	-0.69	0.489	-.026256 .0125736
_cons	.4133225	.0552081	7.49	0.000	.3047672 .5218778

$$\ln(\text{TRADE}) = 0.413 + 0.399 * \ln(\text{EXPORT}) + 0.582 * \ln(\text{IMPORT}) - 0.006 * \ln(\text{DIST}) \quad (2)$$

The Stata 14 program was used to run the standard gravity model estimation. The results can be explained as follows:

1. Mongolian exports are positively correlated with trade flows. For every percentage point increase in exports, trade flows will increase by 0.399%.
2. The partner country's exports are positively related to Mongolia's trade flows. For every 1 percentage point increase in imports, trade flows will increase by 0.582%.
3. The distance between Mongolia and partner countries is inversely related to trade flows. If the distance increases by 1 percentage point, the trade flow will increase by 0.006%.

In order to conduct in-depth research and determine the relationship between Mongolian foreign trade and economic scale of partner countries, the linear fitting of 2000-2018 panel data of Mongolia and 20 partner countries is mainly made through STATA 14 (see Figure 1). From the graph, GDP is positively correlated with foreign trade flows.

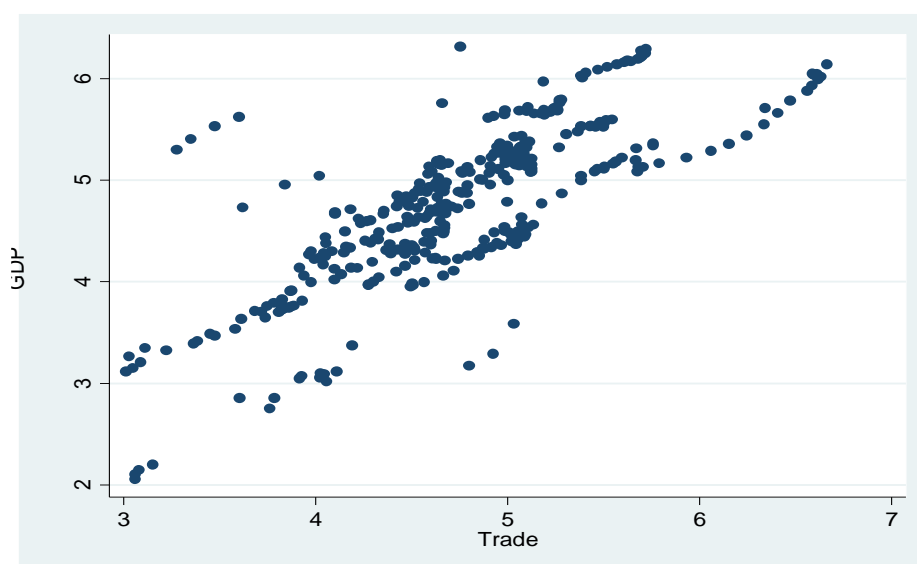


Fig.1. Scatterplot of the relationship between GDP and trade flow

Descriptive statistics of the main variables are shown in Table 3.

Table 3. Descriptive statistics of main variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Country	380	10.5	5.773884	1	20
Trade	380	4.745418	.6815874	3.012	6.664
GDP	380	4.757052	.7838523	2.055	6.313
FDI	380	3.315242	.8815875	-3.4	5.46
Pop	380	49.87811	46.38027	2.39	145.9
Inf	380	4.069034	5.867183	-3.68	54.9
Dist	380	3.49245	.8373747	0	4.029
Ulevel	380	73.29321	16.19698	27.61	100
Dummy1	380	.1	.3003955	0	1
Dummy2	380	.9210526	.2700121	0	1

(3) Empirical analysis and results

Table 4. Model results

Source	SS	df	MS	Number of obs	=	380
Model	142.14121	8	17.7676512	F(8, 371)	=	194.29
Residual	33.9275452	371	.091448909	Prob > F	=	0.0000
				R-squared	=	0.8073
				Adj R-squared	=	0.8031
Total	176.068755	379	.464561358	Root MSE	=	.30241

Trade	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
GDP	.4497192	.0304991	14.75	0.000	.3897465 .5096919
FDI	.0992504	.0195759	5.07	0.000	.0607569 .137744
Pop	.0020063	.0006083	3.30	0.001	.0008101 .0032025
Inf	-.0173374	.0029732	-5.83	0.000	-.0231838 -.011491
Dist	-.0005929	.0215231	-0.03	0.978	-.0429155 .0417296
Ulevel	.0063863	.0011441	5.58	0.000	.0041365 .0086361
Dummy1	.9190977	.0756055	12.16	0.000	.7704287 1.067767
Dummy2	.2515566	.0672041	3.74	0.000	.1194079 .3837053
_cons	1.457908	.1393384	10.46	0.000	1.183916 1.7319

From the above view, the value of the determined coefficient of determination (R-squared) is high. It can be said that the joint effect of the eight unrelated variables that affect the so-called correlation coefficient on foreign trade flow is 80.7%. Only when the probability values of all variables are less than 0.05, it shows that those variables have great influence. China Mongolian foreign trade gravity model is China Mongolia gross domestic product (GDP), total population (POP), direct investment (FDI), urbanization level (ULEVEL), whether it is a member of the World Trade Organization (DUMMY2), whether it is a neighbor (DUMMY1) and other variables are positively correlated. Inflation level (INF) is negatively correlated with the distance between two countries (DIST). Using the gravity model formula to calculate the total trade volume between China and Mongolia in 2020, the calculation process is as follows:

$$\begin{aligned} \ln(\text{Trade}) = & 1.457 + 0.449 * \ln(\text{GDP}) + 0.099 * \ln(\text{FDI}) + 0.002 * \ln(\text{POP}) - 0.017 * \ln(\text{INF}) - \\ & - 0.0005 * \ln(\text{DIST}) + 0.006 * \ln(\text{ULEVEL}) + 0.919 * \text{DUMMY1} + 0.251 * \text{DUMMY2} \quad (3) \end{aligned}$$

Table 5. China Mongolia trade status and forecast in 2020, 2030 and 2050

Index	2020 year	2030 year	2050 year
Ln(GDP)	21.25	21.59	21.92
Ln(FDI)	7.694	8.393	8.694
Ln(POP)	7.64	7.70	7.73
Ln(INF)	1.32	1.55	1.57
Ln(DIST)	7.06	7.06	7.06
Ln(ULEVEL)	4.13	4.27	4.33
DUMMY1	1	1	1
DUMMY2	1	1	1

Source: China and Mongolia Statistics Bureau Yearbook Data Report, World Bank Report

Using the gravity model formula to calculate the total trade volume between China and Mongolia in 2020, the calculation process is as follows:

$$\begin{aligned} \text{Ln}(\text{Trade}_{\text{C\&M}}) = & 1.457 + 0.449 * 21.25 + 0.099 * 7.694 + 0.002 * 7.64 - 0.017 * 1.32 - \\ & - 0.0005 * 7.06 + 0.006 * 4.13 + 0.919 * 1 + 0.252 * 1 = 12.9 \end{aligned} \quad (4)$$

It is widely used in the field of using gravity model, and it is used in many research fields abroad. However, many researches don't mention the inflation and urbanization levels of Mongolia and partner countries. Therefore, this research refers to the variables of inflation and urbanization in Mongolia and partner countries. At the same time, the 19 year data of 20 countries and regions that accounted for high and low in Mongolian foreign trade added 8 variables to the gravity model equation. The gravity model proves that the GDP, population, urbanization level, inflation level, distance between the two countries, and whether the two countries are adjacent to each other in the partner country have a great influence on Mongolian foreign trade. 80.7% of the total trade flow is determined by the factors listed above, and the rest is determined by other factors. In 2020, total trade flow $\text{Ln}(\text{Trade})^e = e\text{Ln}(\text{Trade}) = 2.72^{12.9} = 400561$ million USD, and the total trade flow between China and Mongolia in 2030 and 2050 year may be 514,100 million USD and 573,790 million USD.

Conclusions. China Mongolia economic and trade cooperation faces many challenges, but there are still many possibilities for development. The two countries have established a comprehensive strategic partnership and expanded the scope of cooperation by strengthening the connection between the “Belt and Road” and “Steppe Silk Road” initiative. Prevent risks of economic and trade cooperation and make cooperation more successful. Therefore, the two countries must mobilize opportunities according to world development trends and support each other's sustained and healthy development of bilateral economic and trade cooperation. Both sides are increasing the frequency of high level visits and actively promoting regional cooperation. At the same time, on the basis of the “Joint Declaration on the Establishment of a Strategic Partnership between Mongolia and China”, actively promote the “China Mongolian Economic and Trade Cooperation Medium Term Development Plan” and establish an intergovernmental economic, trade and scientific cooperation committee to develop minerals, energy, telecommunications and other mechanisms and infrastructure construction are key directions for economic and trade cooperation. Strengthen regional cooperation, develop cities along the “Belt and Road” initiative, establish economic development model cities between the ports, and develop friendly relations between major cities in China and Mongolia to deepen mutual understanding between citizens of the two countries, the strategic partnership will be further developed. The investment and legal environment need to be improved, and infrastructure needs to be accelerated. Under the comprehensive strategic framework, legislative cooperation needs to be strengthened. Establish a mutually beneficial mechanism to mutually accept legal and policy issues. In addition, bilateral economic and trade cooperation also supports the environmental development system, ensuring reliable and high quality cooperation is a healthy development path for government cooperation. In the past, investment in the mining and construction industry has also increased, but necessary to increase investment in wool, cashmere, telecommunications and primary processing. Judging from the international economic situation and Mongolian economic trends, China Mongolia cooperation has complementary potential. Mongolia has huge mineral resources, while China has scientific and technological advantages, but due to lack of resources per capita, the two sides are cooperating in a complementary way.

This paper used 380 panel data from 20 countries and regions, including China, Mongolia, Russia, North Korea, Japan, the United States, Germany, Canada, Kazakhstan, and Singapore. The results of the research indicate that China Mongolia trade is positively related to GDP, total population, urbanization level, inflation level, neighboring countries and other factors, and the distance between the two countries is negatively related. At the same time, it is estimated that the total trade flow between China and Mongolia in 2020, 2030 and 2050 will be 400,561 million USD, 514.1 million USD and 573,790 million USD respectively.

REFERENCES

1. L. Begzjav. "Mongolia China Cooperation 1949-1999" [M]. Ulaanbaatar, National University of Mongolia, 1999
2. Historical relations the People's Republic of China and Mongolia (1949-2014) [M]. Ulaanbaatar, National University of Mongolia, 2015
3. E. Borshilov, N. Ulzii-Ochir. "Analyzing the Impact of Mongolia's Trade Costs" [J]. Northern Asian Economic Review, 2016
4. T. Battsetseg. "Mongolian China Regional Relations" [J]. Institute of International Studies, Mongolian Science Academy, 2012
5. B. Bayarkhuu. "OBOR and Mongolia" [J]. Mongolian Economy, 2018
6. N.Lkhamsuren. "China Mongolian Russian Trade Development Model under The Perspective of China Mongolian Economic Corridor: Analysis Based on Gravity Model" [D]. Inner Mongolia University, 2017
7. Bao Ming Qi. "Sino Mongolian Economic and Trade Cooperation Research" [D]. Jilin University, 2016
8. Shiro Armstrong. "Measuring Trade and Trade Potential: A Survey" [J]. Asia Pacific Economic Papers -2007
9. "Near 2014" International forum, Proceedings of the conference, 2014
10. B. Sanjmyatav. "World Economics" [M]. 2014
11. B. Sanjmyatav. "Diplomatic and International Negotiations" [M]. Ulaanbaatar, 2018
12. O. Oyun. "Mongolia China Trade and Economy cooperation Some Problem" [J]. Inner Mongolia University, Center for Mongolian Studies, 2018
13. Qian Shen. "Analysis of Sino-Russia-Magnolia Trade Cooperation Potential: Based on the Perspective of Trade Gravity Model" [J]. Advances in Social Science, Education and Humanities Research, volume 91, 2016
14. B. Batmunkh. "Research of macroeconomic factors" [J]. Ulaanbaatar, National University of Mongolia and National Statistical Office, 2010